SG "051"

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State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

November 1, 2005

Mr. Kent Berg
25 North Main
Heber City, Utah 84032

Subject: Determination on Permitting Requirements, Charleston Pit, Wasatch County, Utah

The Division has completed an investigation of the Charleston pit operated by Wasatch County located in section 18 of Township 4 South Range 5 East. Our inspector, Lynn Kunzler, Dan Smith, our GIS Analyst and I, accompanied by Bryce Tripp, Professional Geologist with the Utah Geological Survey, investigated the site on September 22, 2005. The material being excavated at the pit has been determined to be a bedrock material primarily composed of sandstone. Even though the material is highly fractured and breaks down into sand and gravel size fragments, the material is consolidated and is in place in coherent beds. Therefore, the Charleston pit does not qualify as sand and gravel deposited by alluvial processes and is not exempt from the permitting requirements of the Utah Mined Land Reclamation Act. A copy of Bryce Tripp's report is enclosed for your information and files.

In order to continue to operate the pit, a permit from our office will be required at this time. The appropriate forms for filing a Notice of Intent to Mine are located at the Division's web site at: www.ogm.utah.gov/minerals/MINERALSFORMS. We look forward to working with you on this project and appreciate your help with this permitting activity.

Thank you again for your cooperation during this process. Please don't hesitate to call if you have any questions.

Sincerely,

Daron R. Haddock

Daron R. Haddock
Permit Supervisor
Minerals Regulatory Program

DRH:jb
Attachment: UGS report
O:\M051-Wasatch\WasatchCoPit\final\Charlestonpit.doc

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MEMORANDUM
TO: Utah Division of Oil, Gas and Mining (DOGM), Minerals Regulatory Program
FROM: Bryce Tripp, Senior Scientist, Utah Geological Survey
DATE: October 25, 2005
SUBJECT: Geology of the Charleston pit

As requested by DOGM, I have evaluated the geology of the material mined at the Charleston pit which is operated by Wasatch County. I have reviewed the literature and available geologic map by Biek and Lowe (2005) and toured the property. Daron Haddock, Lynn Kunzler, Dan Smith, and I met Kent Berg from Wasatch County at the Charleston pit at around 1:00 pm on September 22, 2005. Daron discussed the applicable rules with Kent Berg, Dan Smith performed a GPS survey of the pit perimeter, and I examined rock exposures in the pit and photographed outcrops.

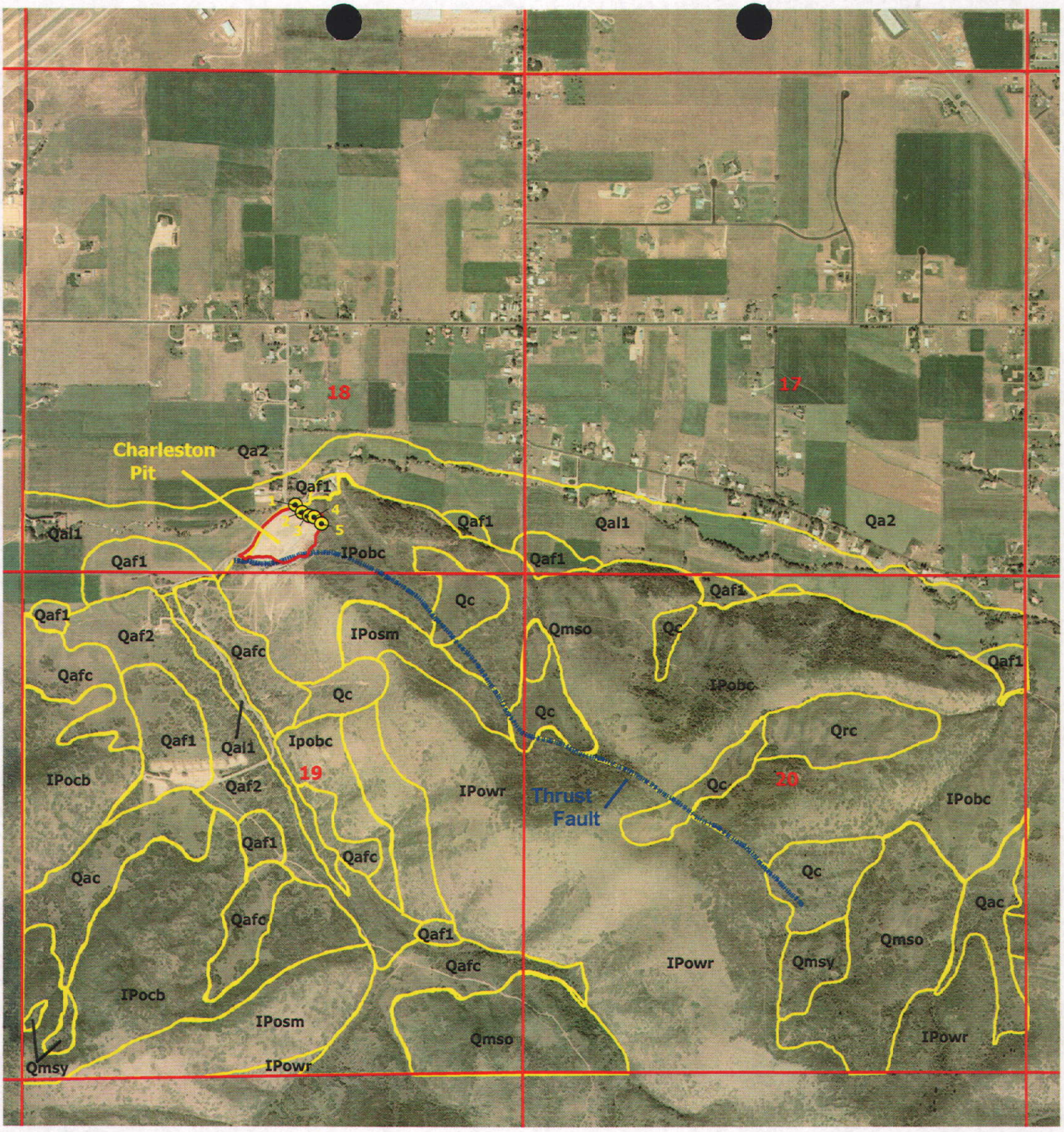
The Charleston pit (figure 1) is located in section 18, T.4S., R.5E., SLBM, Charleston 7.5' quadrangle, in Wasatch County. All of the material being mined from the pit is tan, fractured, and very fine-grained sandstone of the Pennsylvanian Bear Canyon Member of the Oquirrh Formation (IPobc on figure 2). The fracturing is so intense that most of the fragments are in the 0.5 to 3 inch range and some sections of the pit have fractures filled with well-developed fault gouge (figure 4). A thrust fault cuts through the pit so the east and west parts of the pit represent slightly different strata of the Bear Canyon Member. All the fracturing is a benefit to Wasatch County because no blasting and probably little crushing is required to produce a usable product.

I consider all of the sandstone in the pit to be bedrock because it is consolidated and is in place in coherent beds (figures 3-5). Outcrops across the pit have similar strikes and dips. There is no evidence that any of the material being mined has been eroded, modified, or transported by recent alluvial processes. Also, there is no geologic evidence to indicate that the material being mined is "rock aggregate".

References:

Biek, R.F., and Lowe, Mike, 2005, Interim geologic map of the Charleston quadrangle, Wasatch County, Utah: Utah Geological Survey Open File Report 452, scale 1:24,000.

Figure 1. Wasatch County personnel loading crushed sandstone from the Charleston pit. View to the west.



Qal1 -- Alluvial deposits
Qat2 -- Stream terrace deposits
Qa2 -- Valley-fill deposits
Qaf1 -- Alluvial fan deposits
Qaf2 -- Level 4 alluvial fans
Qc -- Colluvial deposits
Qmsy -- Younger landslides

Qmso -- Older landslide deposits
Qac -- Alluvial and colluvial deposits
Qafc -- Alluvial fan and colluvial deposits
Qrc -- Residual and colluvial deposits
IPowr -- Wallsburg Ridge Mbr. of Oquirrh Fm.
IPosm -- Penn. Shingle Mill Lst. Mbr of Oquirrh Fm.
IPobc -- Penn. Bear Cyn. Mbr. of Oquirrh Fm.
⊙— **2** Photo location

Figure 2. Geologic setting of the Charleston sandstone quarry, sec. 17-20, T.4S., R.5E., Wasatch County, Utah. Geological contacts digitized from Biek and Lowe (2005). The air photo base map is a 2004, 1-meter-resolution color National Agricultural Imagery Program photo.

Figure 3. Fractured sandstone at point 2 on figure 2 (note pen for scale).

Figure 4. Fractured tan sandstone showing gouge development along local fracture (location 3 on figure 2).

Figure 5. Tan fractured sandstone at location 4 on figure 2.